

VH DOMAIN

	10	20	30	40
MaE11	DVQLQESGPG * * *	LVKPSQSLSL * * *	ACSVTGYSTS * * *	[GYSWN]WIRQF *
F(ab)-2	EVQLVESGGG	LVQPGGSLRL	SCAVSGYSTS * * * * *	[GYSWN]WIRQA * * * *
humIII	EVQLVESGGG	LVQPGGSLRL	SCAASGFTF-S	[DYAMS]WVRQA
	49	60	70	80
MaE11	PGNKLEWMG ** **	[SITYDGSSNYN PSLKN]RISVT * * * * *		RDTSQNQFFL * * * *
F(ab)-2	PGKLEWVA	[SITYDGSTNYA DSVKG]RFTIS * * * * *		RDDSKNTFYL
humIII	PGKLEWVA	[VISNGSDTYA DSVKG]RFTIS		RDDSKNTLYL
	82abc 90	100abcd 103	113	
MaE11	KLNSATAEDTATY ** ** *	YCAR[GSHYFGHWHFAV] * *	WGAGTTVT	VSS
F(ab)-2	QMNSLRAEDTAVY	YCAR[GSHYFGHWHFAV] * * * * *	WGQGTTLVT	VSS
humIII	QMNSLRAEDTAVY	YCAR[DSRFF-----DV]	WGQGTTLVT	VSS

VL DOMAIN

	10	20	30 32abcd	40
MaE11	DIQLTQSPAS *	LAVSLGQRAT * * * * *	ISC[KASQSVD YDGDSYMN]	WYQQKP
F(ab)-2	DIQLTQSPSS	LSASVGDRVT	ITC[RASQSVD YDGDSYMN] * * * *	WYQQKP
humk1	DIQMTQSPSS	LSASVGDRVT	ITC[RASQSVD IS--SYLN]	WYQQKP
	49	60	70	80
MaE11	GQPPILLIY * * *	[AASYLGS]EIPA * * * *	RFSGSGSGTD	FTLNHPVEE * * * * *
F(ab)-2	GKAPKLLIY	[AASYLES]GVPS *	RFSGSGSGTD	FTLTISLQP
humk1	GKAPKLLIY	[AASSLES]GVPS	RFSGSGSGTD	FTLTISLQP
	88	97	107	
MaE11	EDAATFYC * *	[QQSHEDPYT]	FGAGTKLEIK * *	
F(ab)-2	EDFATYYC	[QQSHEDPYT] * * * *	FGQGTKVEIK	
humk1	EDFATYYC	[QQYNSLPYT]	FGQGTKVEIK	

FIG._1

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LIGHT CHAIN

	10	20	30	40
e27	DIQLTQSPSS	LSASVGDRVT	ITCRASKEVD	<u>CEGDSYLNWY</u>
e26	DIQLTQSPSS	LSASVGDRVT	ITCRASKEVD	<u>CEGDSYLNWY</u>
e426	DIQLTQSPSS	LSASVGDRVT	ITCRASQSV	<u>YEGDSYLNWY</u>
e25	DIQLTQSPSS	LSASVGDRVT	ITCRASQSV	<u>YDGDSYMNWY</u>

CDR-L1

	50	60	70	80
e27	QQKPGKAPKL	<u>LIYAASYLES</u>	GVPSRFSGSG	SGTDFTLTIS
e26	QQKPGKAPKL	<u>LIYAASYLES</u>	GVPSRFSGSG	SGTDFTLTIS
e426	QQKPGKAPKL	<u>LIYAASYLES</u>	GVPSRFSGSG	SGTDFTLTIS
e25	QQKPGKAPKL	<u>LIYAASYLES</u>	GVPSRFSGSG	SGTDFTLTIS

CDR-L2

	90	100	110	
e27	SLQPEDFATY	<u>YCQQSHEDPY</u>	TFGQGTKVEI	KRTV
e26	SLQPEDFATY	<u>YCQQSHEDPY</u>	TFGQGTKVEI	KRTV
e426	SLQPEDFATY	<u>YCQQSHEDPY</u>	TFGQGTKVEI	KRTV
e25	SLQPEDFATY	<u>YCQQSHEDPY</u>	TFGQGTKVEI	KRTV

CDR-L3

HEAVY CHAIN

	10	20	30	40
e27	EVQLVESGGG	LVQPGGSLRL	SCAVSGYSIT	<u>SGYSWNWIRQ</u>
e26	EVQLVESGGG	LVQPGGSLRL	SCAVSGYSIT	<u>SGYSWNWIRQ</u>
e426	EVQLVESGGG	LVQPGGSLRL	SCAVSGYSIT	<u>SGYSWNWIRQ</u>
e25	EVQLVESGGG	LVQPGGSLRL	SCAVSGYSIT	<u>SGYSWNWIRQ</u>

CDR-H1

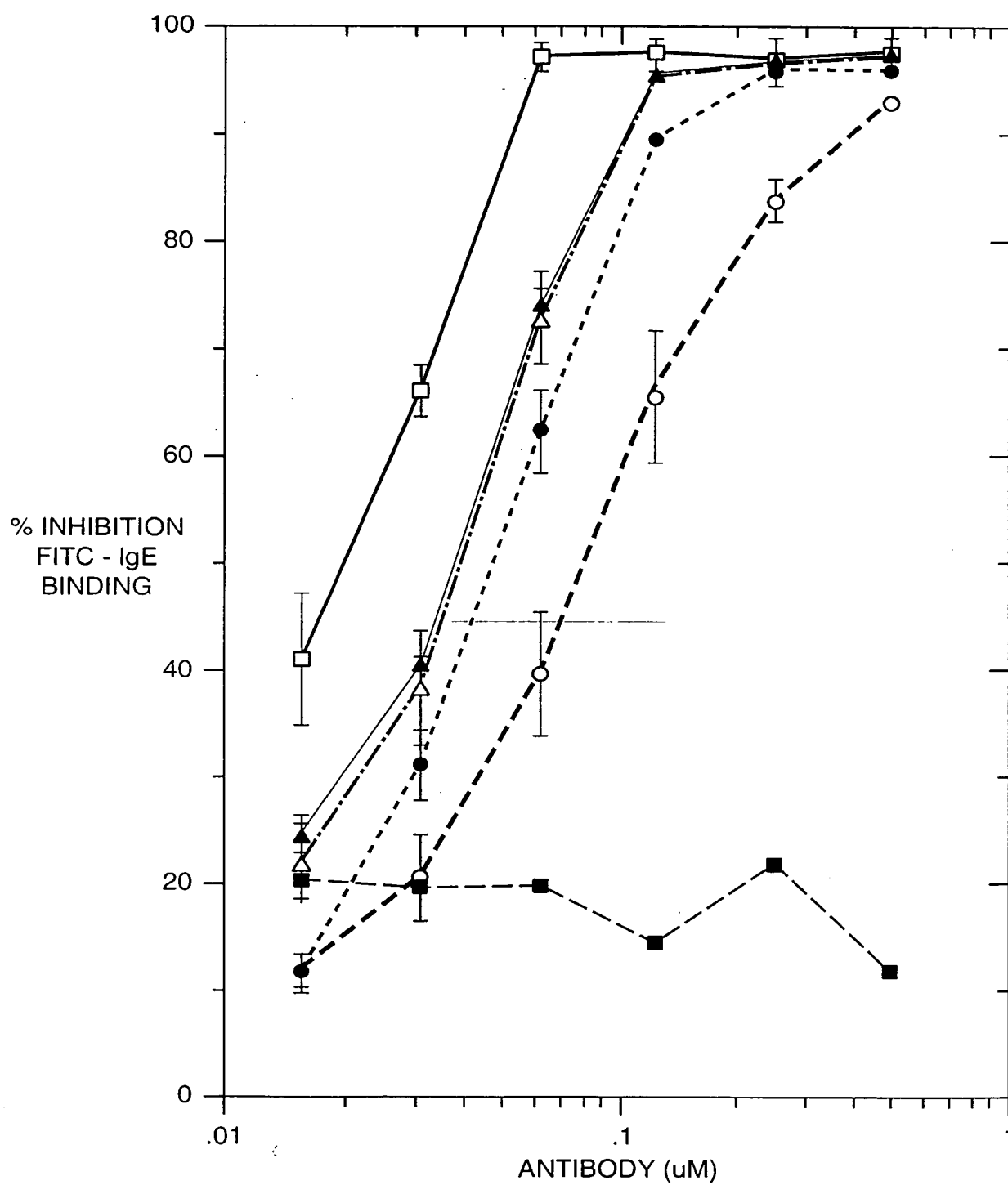
	50	60	70	80
e27	APGKGLEWVA	<u>SITYDGSTNY</u>	<u>NPSVKGRITI</u>	SRDDSKNTFY
e26	APGKGLEWVA	<u>SITYDGSTNY</u>	<u>NPSVKGRITI</u>	SRDDSKNTFY
e426	APGKGLEWVA	<u>SITYDGSTNY</u>	<u>NPSVKGRITI</u>	SRDDSKNTFY
e25	APGKGLEWVA	<u>SITYDGSTNY</u>	<u>NPSVKGRITI</u>	SRDDSKNTFY

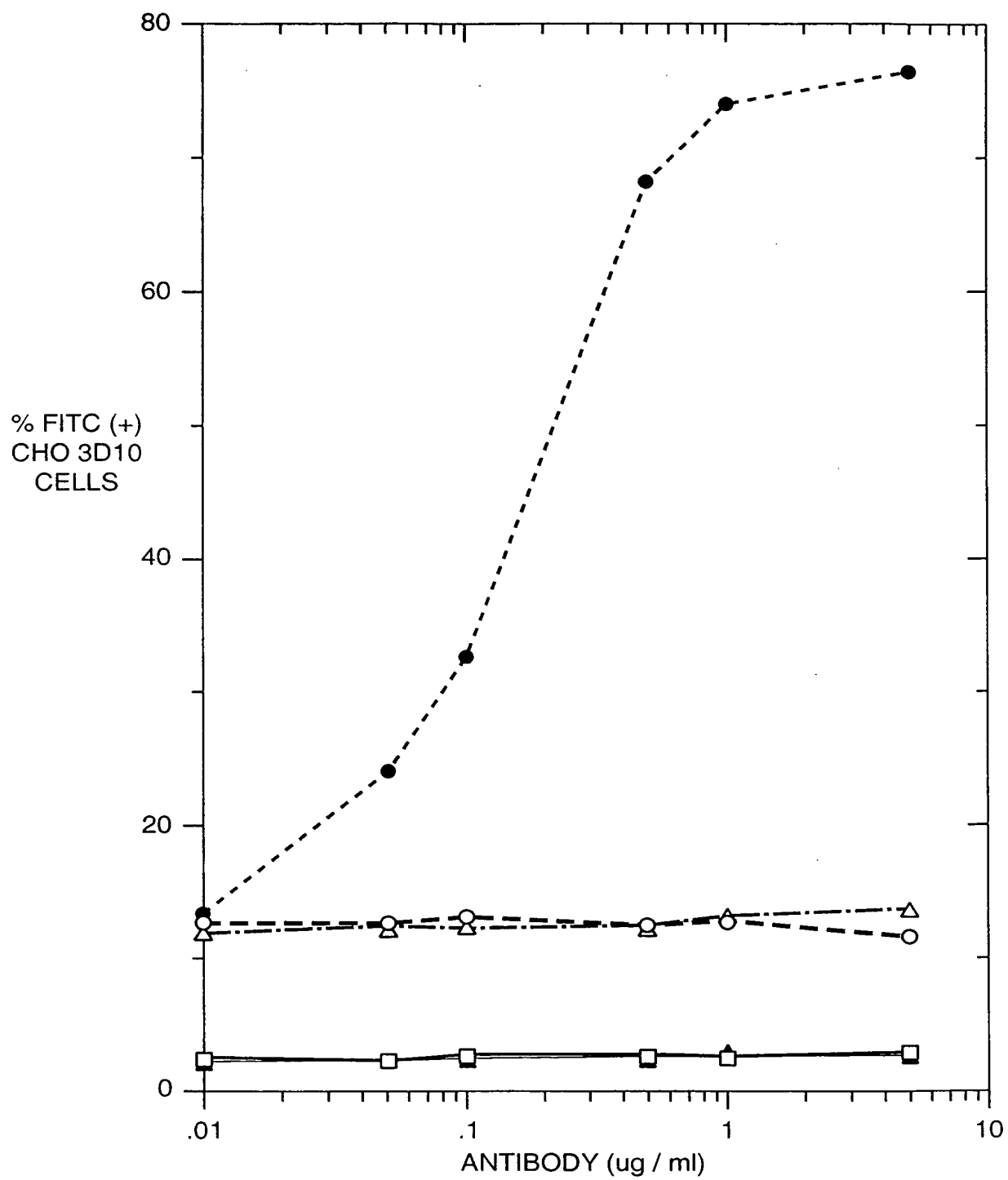
CDR-H2

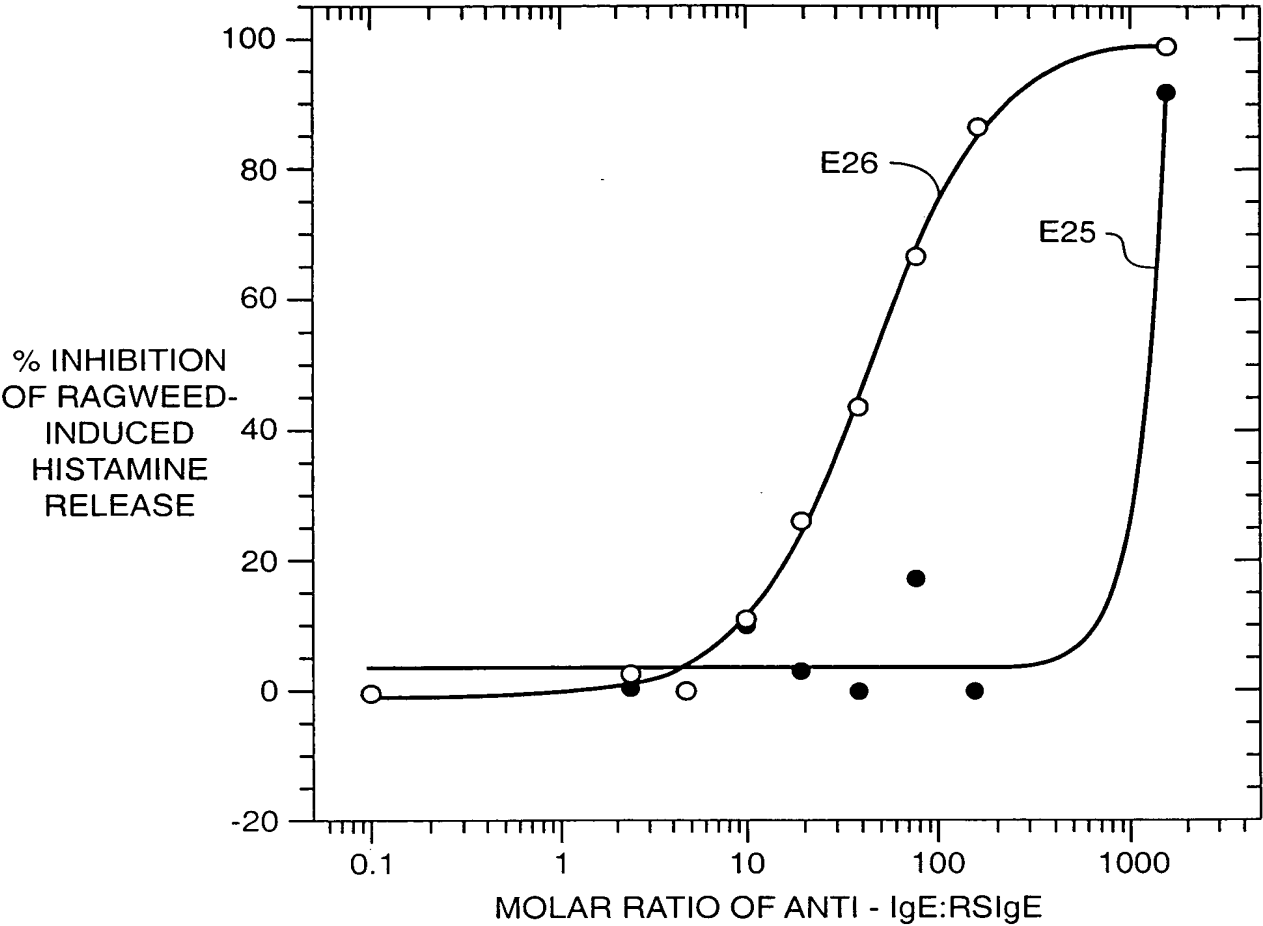
	90	100	110	
e27	LQMNSLRAED	<u>TAVYYCARGS</u>	<u>HYFGHWHFAV</u>	WGQG
e26	LQMNSLRAED	<u>TAVYYCARGS</u>	<u>HYFGHWHFAV</u>	WGQG
e426	LQMNSLRAED	<u>TAVYYCARGS</u>	<u>HYFGHWHFAV</u>	WGQG
e25	LQMNSLRAED	<u>TAVYYCARGS</u>	<u>HYFGHWHFAV</u>	WGQG

CDR-H3

FIG._2

**FIG. 3**

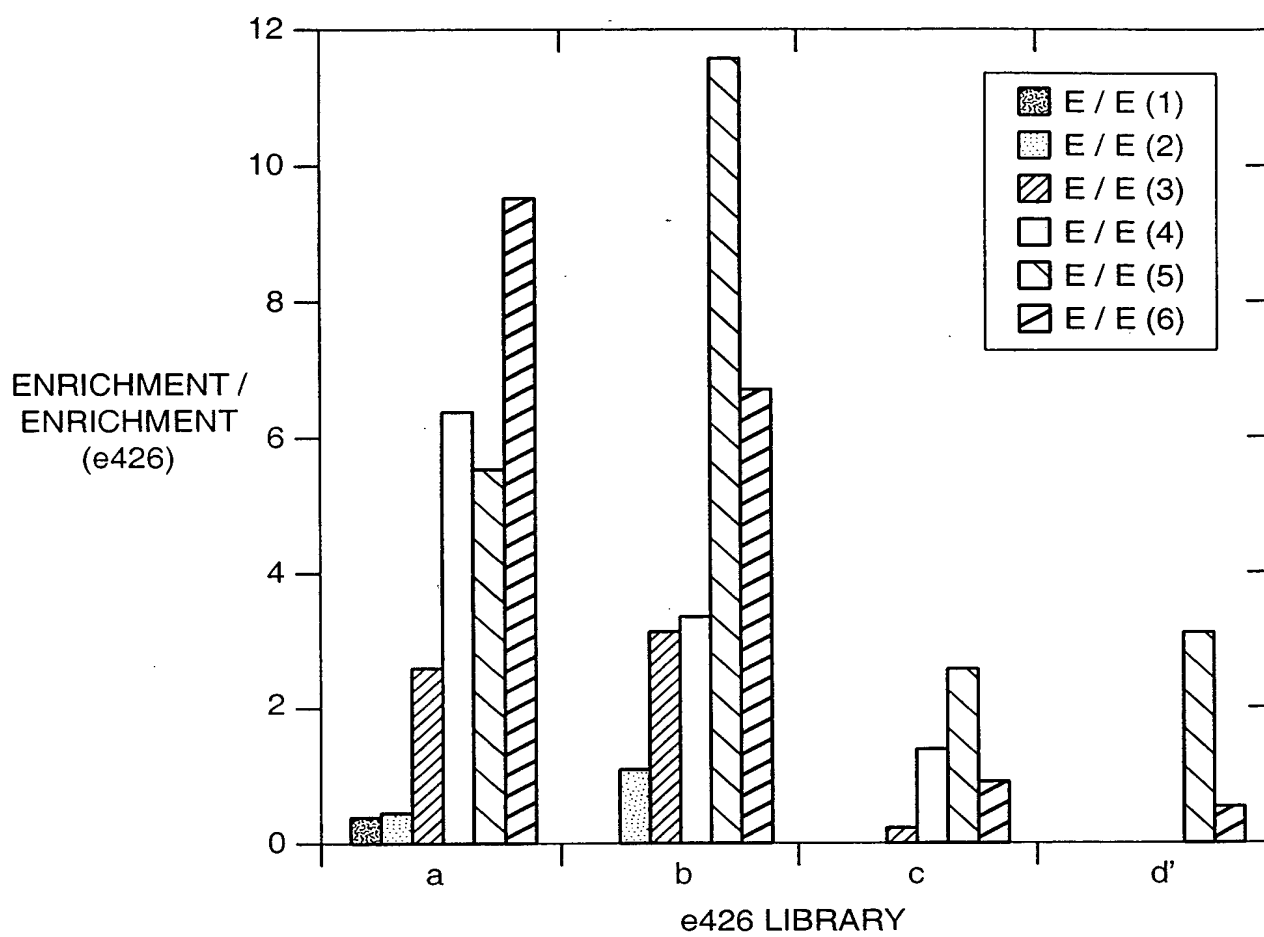
**FIG. 4**

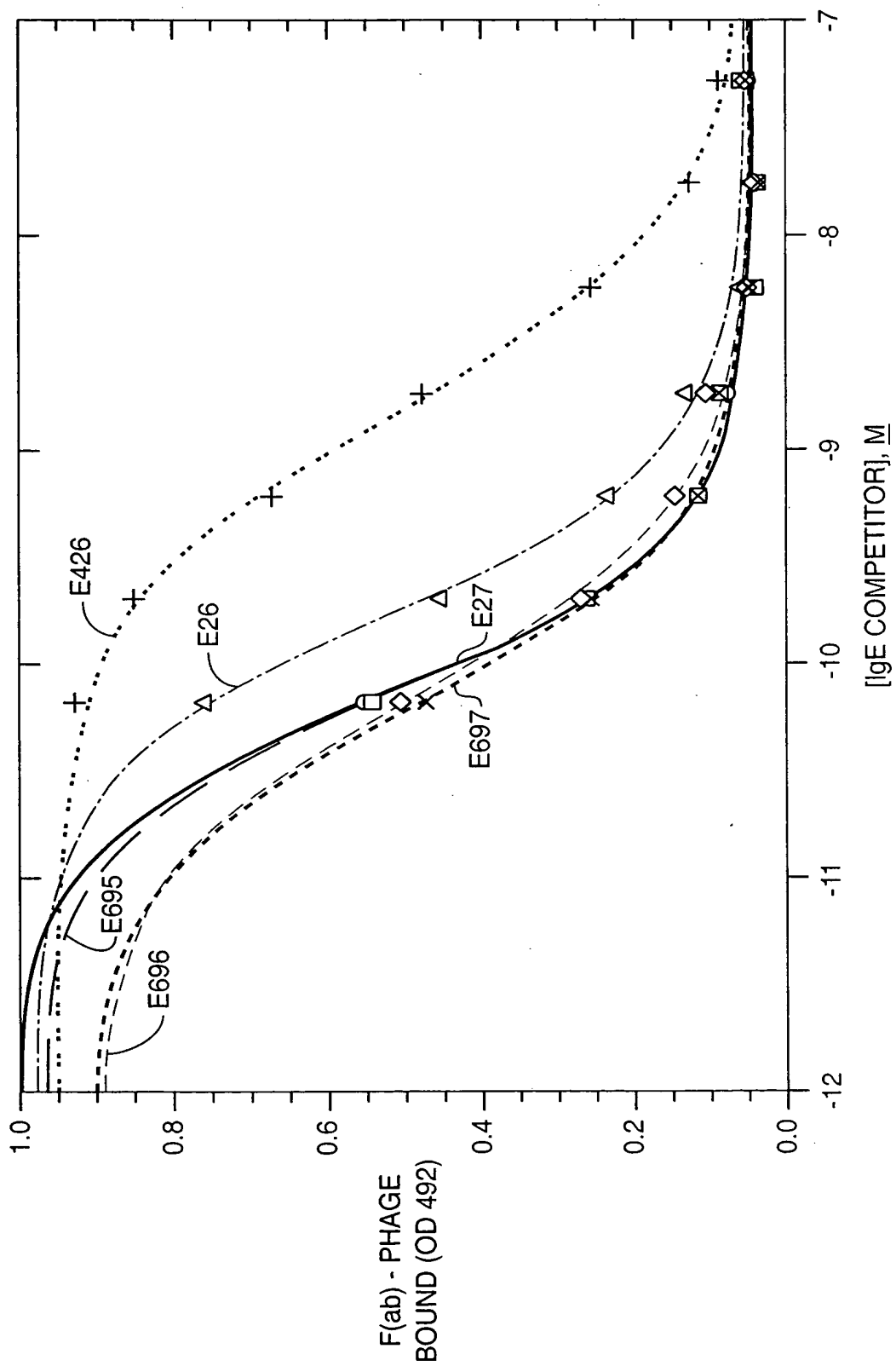


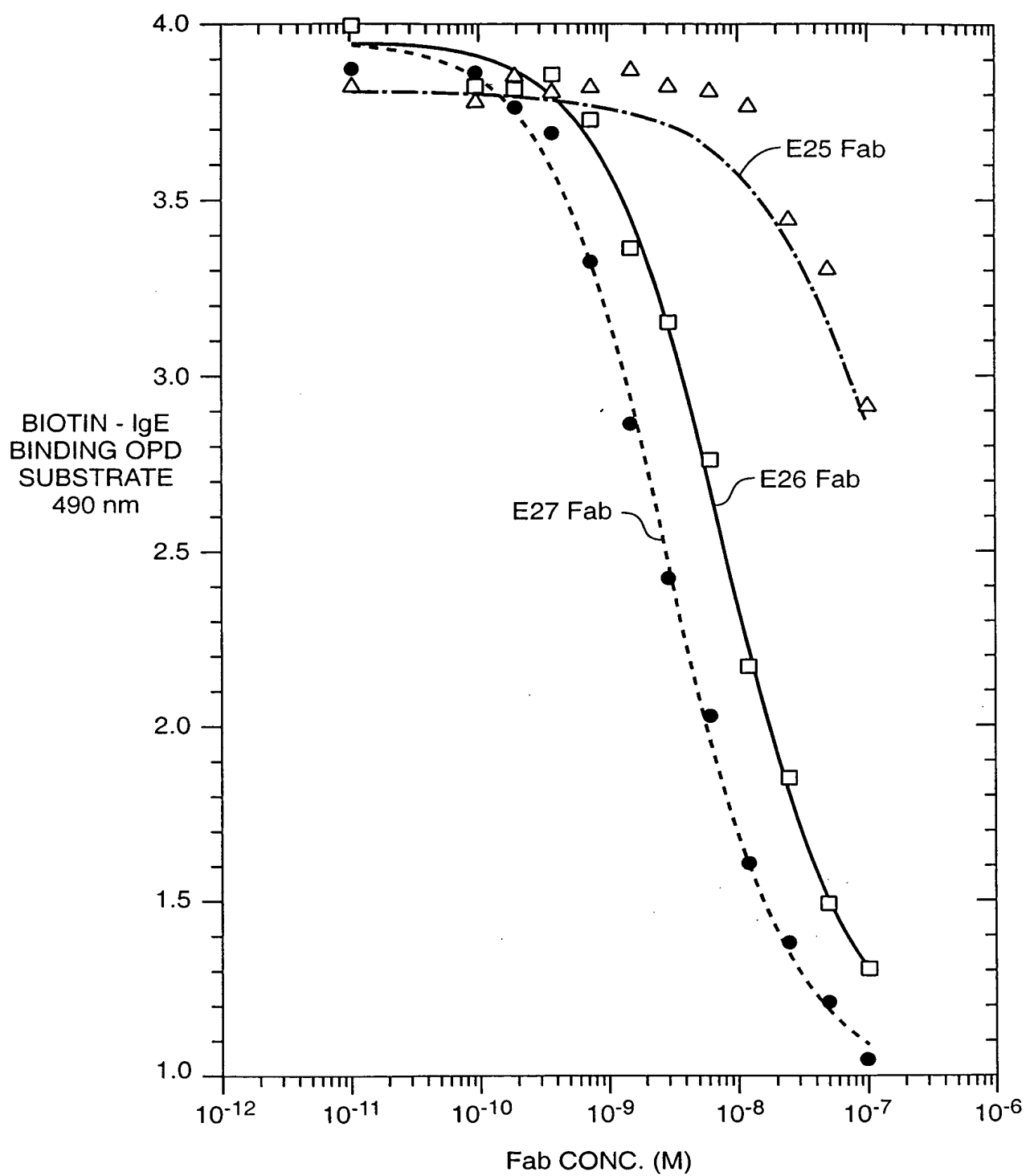
y = ((m1 - m4) / (1 + (m0 / m3)^m2))...		
	VALUE	ERROR
m1	3.7289	3.2575
m2	3.2312	2044.6
m3	3421.3	7.095e+07
m4	1226.5	7.4139e+07
Chisq	293.26	NA
R	0.97929	NA

y = ((m1 - m4) / (1 + (m0 / m3)^m2))...		
	VALUE	ERROR
m1	-0.78645	1.7681
m2	1.3544	0.11267
m3	44.486	3.1931
m4	100.07	2.6239
Chisq	31.442	NA
R	0.99867	NA

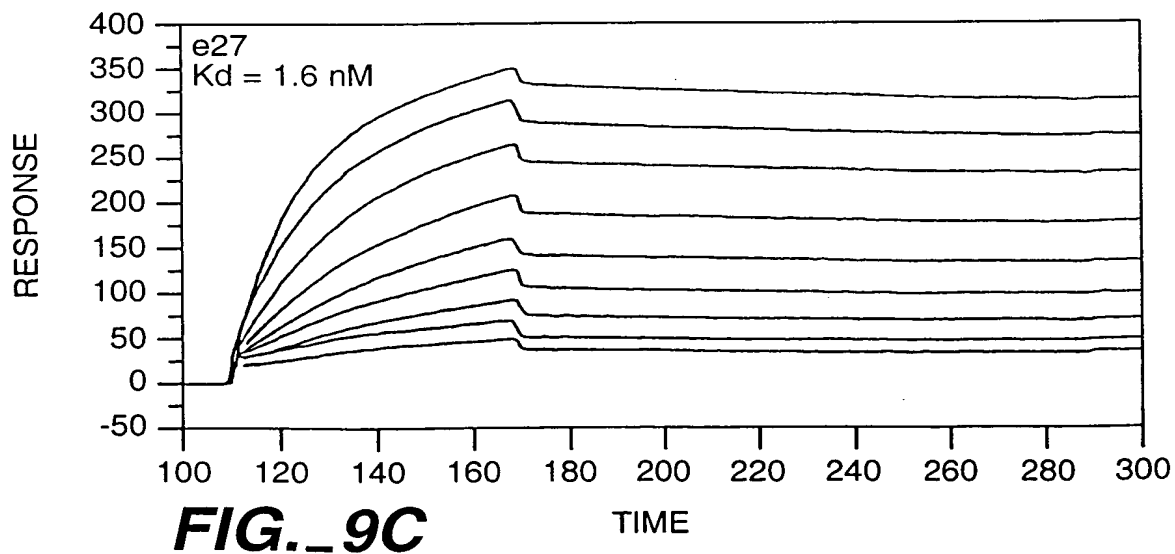
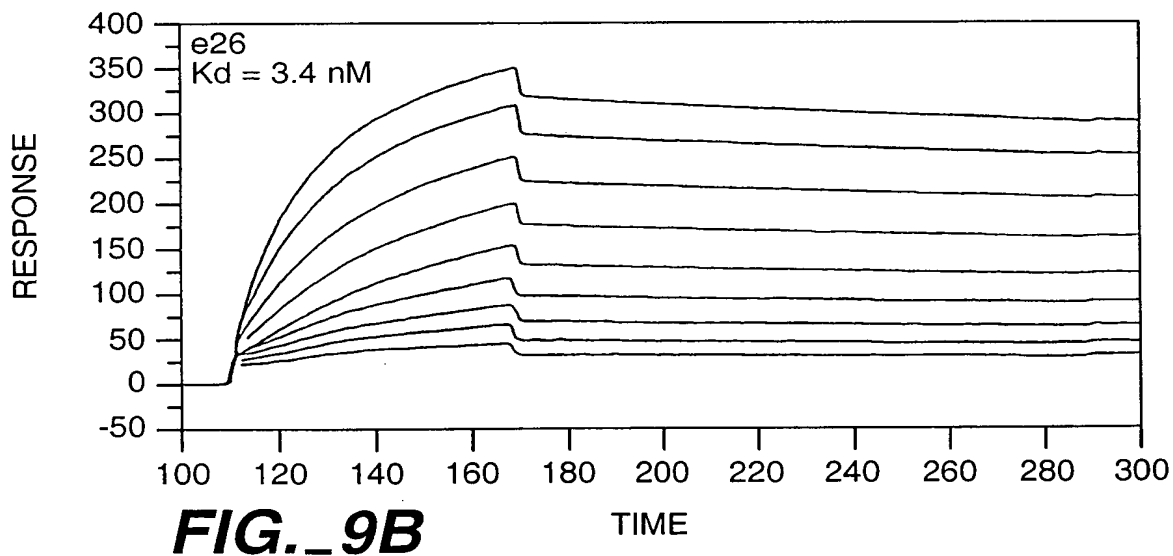
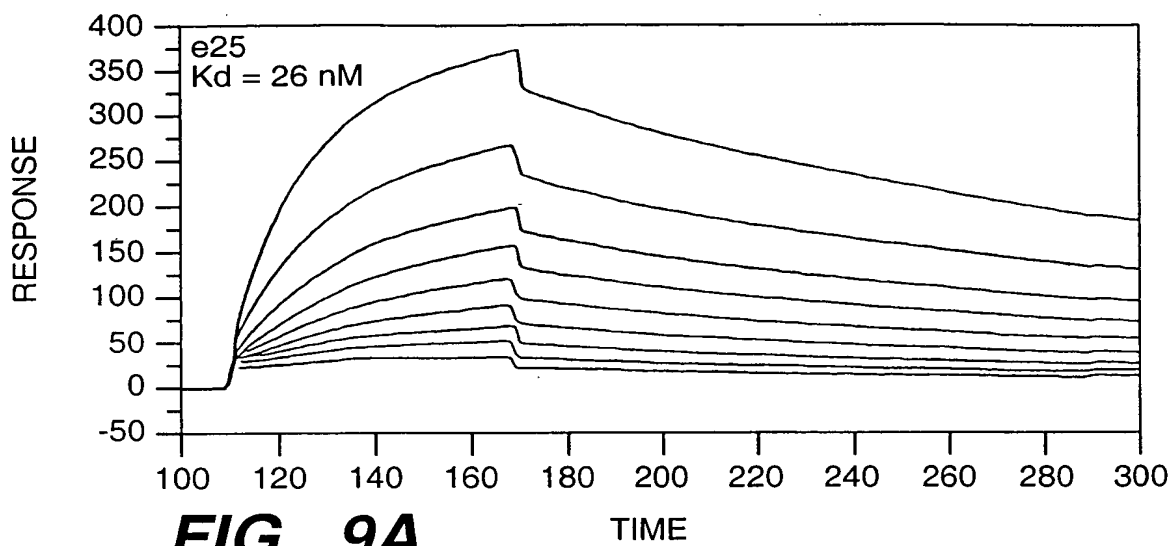
FIG._5

**FIG._6**

**FIG. 7**

**FIG. 8**

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1  GAATTCAACT TCTCCATACT TTGGATAAGG AAATACAGAC ATGAAAAATC TCATTGCTGA GTTGTATTATTT AAGCTTGCCC AAAAAGAAGA AGAGTCGAAT
   CTTAAGTTGA AGAGGTATGA AACCTATTCC TTATATGTCTG TACTTTTTTAG AGTAACGACT CAACAATAAA TTCGAACGGG TTTTCTCTTCT TCTCAGCTTA

101  GAACCTGTGG CGCAGGTAGA AGCTTTGGAG ATTATCGTCA CTGCAATGCT TCGCAATATG GCGCAAAATG ACCAACAGCG GTTGATTGAT CAGGTAGAGG
   CTTGACACAC GCGTCCATCT TCGAAACCTC TAATAGCAGT GACGTTACGA AGCGTTATAC CGCGTTTTAC TGGTTGTGCG CAACATACTA GTCCATCTCC

201  GGGCGCTCTA CGAGGTAAAG CCCGATGCCA GCATTCTCTGA CGACGATACG GAGCTGCTGC GCGATTACGT AAAGAAGTTA TTGAAGCATC CTCGTTCAGTA
   CCCGCGACAT GCTCCATTTC GGGCTACGCT CGTAAGGACT GCTGCTATGC CTCGACGACG CGCTAATGCA TTTCTTCAAT AACTTCGTAG GAGCAGTCAT

301  AAAAGTTAAT CTTTTCACA GCTGTCTATA AGTTGTCACG GCCGAGACTT ATAGTCGCTT TGTTTTTTATT TTTTAATGTA TTTGTAAC TA GAATTCGAGC
   TTTTCAATTA GAAAAGTTGT CGACAGTATT TCAACAGTGC CGGCTCTGAA TATCAGCGAA AAAAAATAA AAAATTACAT AAACATTGAT CTTAAGCTCG

401  TCGGTACCCG GGGATCCTCT CGAGTTGAG GTGATTTTAT GAAAAAGAT ATCGCATTTT TCTTTGCTATC TATGTTCTGTT TTTTCTATTG CTACAAACGC
   AGCCATGGGC CCTTAGGAGA GCTCCAAC TCCTCAACTC CACTAAAATA CTTTTTCTTA TAGCGTAAAG AAGAACGTAG ATACAAGCAA AAAAGATAAC GATGTTTGGC

501  GTACGCTGAT ATCCAGCTGA CCCAGTCCC GAGTCCCTG TCCGCCCTCG TGGCGGATAG GGTCAACCATC ACCTGCCGTG CCAGTCAGAG CGTCGATTAC
   CATGCGACTA TAGTTCGACT GGTTCAGGG CTCGAGGGAC AGGCGGAGAC ACCCGCTATC CCAGTGGTAG TGGACGGCAC GGTCAGTCTC GCAGCTAATG

1  AlaSp IleGlnLeuT hrGlnSerPr oSerSerLeu SerAlaServ alGlyAspAr gValThrIle ThrCysArga laSerGlnSe rValaspTyr
   Begin light chain

601  GAAGGTGATA GCTACCTGAA CTGGTATCAA CAGAAACCAG GAAAAGCTCC GAAACTACTG ATTTACGCGG CCTCGTACCT GGAGTCTGGA GTCCCTTCTC
   CTTCCACTAT CGATGGACTT GACCATAGTT GTCTTTGGTC CTTTTCGAGG CTTTGATGAC TAAATGCGCC GGAGCATGGA CCTCAGACCT CAGGGAAGAG

33  GluGlyAspS erTyrLeuAs nTrpTyrGln GlnLysProG lLysAlaPr oLysLeuLeu IleTyrAlaIa laSerTyrIle uGluSerGly ValProSerArg

701  GCTTCTCTGG ATCCGGTCTT GGGACGGATT TCACTCTGAC CATCAGCAGT CTGCAGCCAG AAGACTTCGC AACTTATTAC TGTCAGCAA GTACAGAGGA
   CGAAGAGACC TAGGCCAAGA CCCTGCCATA AGTGAGACTG GTAGTCGTCA GACGTCGGTC TTCTGAAGCG TTGAATAATG ACAGTCGTTT CAGTGCTCCT

67  PheSerG lYSerGlySer GlyThrAspP heThrLeuTh rIleSerSer leuGlnProG luAspPheAl aThrTyrTyr CysGlnGlnS erHisGluAsp

801  TCCGTAACACA TTTGGACAGG GTACCAAGGT GGAGATCAAA CGAACTGTGG CTGCACCATC TGTCTTCATC TTCCCGCCAT CTGATGAGCA GTTGAAATCT
   AGGCATGTGT AAACCTGTCC CATGGTTCCA CCTCTAGTTT GCTTGACACC GACGTGGTAG ACAGAAGTAG AAGGCGGTA GACTACTCGT CAACTTTAGA

100  ProTyrThr PheGlyGlnG lyThrLysVa lGluIleLys ArgThrVala laAlaProSe rValPheIle PheProProS erAspGluG l nLeuLysSer

901  GGAACCTGCTT CTGTTGTGTG CCTGCTGAAT AACTTCTATC CCAGAGAGGC CAAAGTACAG TGGAAAGGTGG ATAACGCCCT CCAATCGGGT AACTCCCAGG
   CCTTGACGAA GACAACACAC GGACGACTTA TTGAAGATAG GGTCTCTCCG GTTTCATGTC ACCTTCACC TATTGCGGGA GGTAGCCCA TTGAGGGTCC

133  GlyThrAlaS erValValCy sLeuLeuAsn AsnPheTyrP roArgGluAl aLysValGln TrpLysVala spAsnAlaLe uGlnSerGly AsnSerGlnGlu

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FIG.- 10A

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1001 AGAGTGTAC AGAGCAGGAC AGCAAGGACA GCACCTACAG CCTCAGCAGC ACCCTGACGC TGAGCAAAGC AGACTACGAG AAACACAAAG TCTACGCCCTG
167 TCTCACAGTG TCTCGTCTTG TCGTTCCTGT CGTGGATCTC GGAGTCGTCTG TGGGACTGCG ACTCGTTTCG TCTGATGCTC TTTGTGTTTC AGATCGGAC
    SerValTh rGluGlnAsp SerLysAspS erThrLysSe rLeuSerSer ThrLeuThrL euSerLysAl aAspTyrGlu LyHisLysV alTyrAlaCys
1101 CGAAGTCACC CATCAGGGCC TGAGCTCGCC CGTCACAAAG AGCTTCAACA GGGGAGAGTG TTAAGCTGAT CCTCTACGCC GGACGCATCG TGGCCCTAGT
GCTTCAGTGG GTAGTCCCGG ACTCGAGCGG GCAGTGTGTT TCGAAGTTGT CCCCTCTCAC AATTCGACTA GGAGATGCCG CCTGCGTAGC ACCGGGATCA
200 GluValThr HisGlnGlyL euSerSerPr oValThrLys SerPheAsnA rgGlyGluCy sOC*
                                end light chain
1201 ACGCAAGTTC ACGTAAAAAG GGTATCTAGA GGTGAGGTG ATTTTATGAA AAAGAATATC GCATTTCCTC TTGCATCTAT GTTCGTTTTT TCTATTGCTA
TGC GTTCAAG TGCATTTTTC CCATAGATCT CCAACTCCAC TAAATACTT TTTCTTATAG CGTAAAGAAG AACGTAGATA CAAGCAAAA AGATAACGAT
1301 CAAACGCCGA CGCTGAGGTT CAGCTGGTGG AGCTGSGCGG TGGCCTGGTG CAGCCAGGGG GCTCACTCCG TTTGTCTCTGT GCAGTTTCTG GCTACTCCAT
GTTTGGCGCAT GCGACTCCAA GTCGACCACC TCAGACCGCC ACCGGACCAC GTCGGTCCCC CGAGTGAGGC AAACAGGACA CGTCAAAGAC CGATGAGGTA
1      GluVal GlnLeuValG luSerGlyG lGlnLeuVal GlnProGlyG lySerLeuAr gLeuSerCys AlaValSerG lyTyrSerIle
                                Begin heavy chain
1401 CACCTCCGGA TACAGTGA ACTGGATCCG TCAGGCCCGG GGTAAAGGCC TGAATGGGT TGCATCGATT ACGTATGACG GATCGACTAA CTATAACCCCT
GTG GAGGCCAT ATGTCACCT TGACCTAGGC AGTCCGGGCG CCATTCCCGG ACCTTACCCA ACGTAGCTAA TGCATACTGC CTAGCTGATT GATATTGGGA
30 ThrSerGly TyrSerTrpA snTrpIleAr gGlnAlaPro GlyLysGlyL euGluTrpVa lAlaSerIle ThrTyrAspG lySerThrAs nTyrAsnPro
1501 ACGGTCAAG GCCGTATCAC TATAAGTCGC GACGATTCCA AAAACACATT CTACCTGCAG ATGAACAGCC TGGGTGCTGA GGACACTGCC GTCATTATT
TCG CAGTTCC CGGCATAGTG ATATTACGG CTGCTAAGT TTTTGTGTAA GATGGACGTC TACTTGTCTGG ACGCACGACT CCTGTGACGG CAGATAATAA
63 SerValLysG lyArgIleTh rIleSerArg AspAspSerL ysAsnThrPh eTyrLeuGln MetAsnSerL euArgAlaG lUaspThrAla ValTyrTyrCys
1601 GTGCTCGAGG CAGCCACTAT TTCGGTCACT GGCACTTCCG CGTGTGGGT CAAGGAACCC TGGTCACCGT CTCTCTCGGC TCACCAAGG GCCCATCGGT
CAG GAGCTCC GTCGGTGATA AAGCCAGTGA CCGTGAAGCG GCACACCCCA GTTCCCTTGG ACCAGTGCCA GAGGAGCCGG AGGTGGTTCC CGGTAGCCA
97 AlaArgG lYSerHisTyr PheGlyHisT rpHisPheAl aValTrpGly GlnGlyThrL euValThrVa lSerSerAla SerThrLysG lyProSerVal
1701 CTTCCCCCTA GCACCTCCTT CCAAGAGCAC CTCTGGGGG ACAGCGGCC CTGGGTGCCT GGTCAAGGAC TACTTCCCCG AACGGTGAC GGTGTCTGG
GAAGGGGGAT CGTGGGAGGA GGTCTCTGTG GAGACCCCGG TGTCGCCGGG ACCCGACGGA CCAGTTCTCTG ATGAAGGGG TTGGCCACTG CCACAGCACC
130 PheProLeu AlaProSerS erLysSerTh rSerGlyGly ThrAlaAlaL euGlyCysLe uValLysAsp TyrPheProG luProValTh rValSerTrp
1801 AACTCAGGCG CCCTGACCAG CGGCGTGCAC ACCTTCCCG CTGTCTTACA GTCTCTCAGGA CTCTACTCCC TCACGACCGT GGTGACCGTG CCCTCCAGCA
TTGAGTCCCG GGGACTGTCT GCCGCACGTG TGAAGGGCC GACAGGTCTT CAGGAGTGT GAGATGAGGG AGTCGTGCGA CCACGTGGC GGGAGGTCTG
163 AsnSerGlyA laLeuThrSe rGlyValHis ThrPheProA laValLeuG lNserSerGly LeuTyrSerL euSerSerVa lValThrVal ProSerSerSer

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FIG. 10B

1901 GCTTGGGCAC CCAGACCTAC ATCTGCAACG TGAATCACAA GCCCAGCAAC ACCAAGGTGG ACAAGAAAGT TGAGCCCCAAA TCTTGTGACA AAACCTCACAC
 197 CGAACCCTGG GGTCTGGATG TAGACGTTGC ACTTAGTGTG CCGGTCTGTTG TGGTCCACC TGTTCTTCA ACTCGGTTT AGAACACTGT TTTGAGTGTG
 LeuGlyth rGlnThrTyr IleCysAsnV alasnHisly sProSerAsn ThrlySVala sPlySlySva lGluProlyS SerCysAspL ysThrHisThr
 end of heavy chain
 2001 CTAGAGTGGC GGTGGCTCTG GTTCCGGTGA TTTTGATTAT GAAAAGATGG CAAACGCTAA TAAGGGGGCT ATGACCCGAAA ATGCCGATGA AAACGGCGTA
 GATCTACCG CCACCGAGAC CAAGGCCACT AAAACTAATA CTTTCTTACC GTTTCGATT ATTCCCCGA TACTGGCTTT TACGGCTACT TTTGGCGCGAT
 230 AM*SerGly GlyGlySerg lySerGlyAs pheAspTyr GlulysMeta laasnalaas nLysGlyAla MetThrGluA snAlaAspG l uasnAlaLeu
 fusion to g3p C-terminal domain
 2101 CAGTCTGACG CTAAAGGCAA ACTTGATTCT GTCGCTACTG ATTACGGTGC TGCTATCGAT GGTTCATTG GTGACGTTTC CGGCCTTGCT AATGGTAATG
 GTCAGACTGC GATTTCGTT TGAACCTAAGA CAGCGATGAC TAATGCCACG ACGATAGCTA CCAAAGTAAC CACTGCAAG GCCGGAACGA TTACCATTTAC
 263 GlnSerAspA lalysGlyly sLeuaspSer ValalaThra sPtyrGlyAl aAlaIleasp GlyPheIleG lyAspValise rGlyLeuAla AsnGlyAsnGly
 2201 GTGCTACTGG TGATTTTGCT GGCTCTAATT CCCAAATGGC TCAAGTCGGT GACGTGATA ATTCACCTTT AATGAATAAT TTCCGTCAAT ATTTACCTTC
 CACGATGACC ACTAAAACGA CCGAGATTAA GGGTTTACCG AGTTCAGCCA CTGCCACTAT TAAGTGGAAA TTACTTTATTA AAGCAGTTA TAAATGGGAAG
 297 AlaThrGl yaspPheAla GlySerAsnS erGlnMetal aglnValgly AspGlyAspA snSerProLe uMetAsnAsn PheArgGlnT yrLeuProSer
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 2301 CCTCCCTCAA TCGGTTGAAT GTCGCCCTTT TGTCCTTAGC GCTGGTAAAC CAFATGAATT TTCTATTGAT TGTGACAAAA TAAACTTATT CCGTGGTGTG
 GGAGGGAGTT AGCCAACCTA CAGCGGGAAA ACAGAAATCG CGACCATTG GTATACTTAA AAGATAACTA ACACCTGTTT ATTGAATAA GGCACCACAG
 330 LeuProGln SerValGluC ysArgProPh eValPheSer AlaGlyLysP rotyrGluPh eSerIleasp CysAspLysI leAsnLeuPh eArgGlyVal
 2401 TTTGCGTTTC TTTTATATGT TGCCACCTTT ATGTATGTAT TTTCTACGTT TGCTAACATA CTGCGTAATA AGGAGTCTTA ATCATGCCAG TTCTTTTGGC
 AAACGCAAAG AAAATATACA ACGGTGGAAA TACATACATA AAAGATGCAA ACGATTCTAT GACGCATTAT TCCTCAGAAT TAGTACGGTC AAGAAAAACCG
 363 PheAlaPheL euLeuTyrVa lAlaThrPhe MetTyrValP heSerThrPh eAlaAsnIle LeuArgAsnL ysGluSerOC *
 end of g3p domain
 2501 TAGCGCCGCC CTATACCTTG TCTGCCCTCC CCGGTTGCGT CGCGGTGCAT GGAGCCGGGC CACCTCGACC TGAATGGAAG CCGCGGGCAC CTCGCTAACG
 ATCGCGGCGG GATATGGAAC AGACGGAGGG GCGCAACGCA GCGCCACGTA CCTCGGCCCG GTGGAGCTGG ACTTACCTTC GGCCGCCGTG GAGCGATTGC
 2601 GATTCAACCAC TCCAAGAATT GGAGCCAATC AATTCTTTCG GAGAACTGTG AATGCGCAAA CCAACCCCTTG GCAGAACATA TCCATCGCGT CCGCCATCTC
 CTAAGTGGTG AGGTTCTTAA CCTCGGTTAG TTAAGAACGC CTCTTGACAC TTACGCGTTT GGTGGGAAC CGTCTTGTAT AGGTAGCGCA GCGGTAGAG
 2701 CAGCAGCCGC ACGCGGCGCA TCTCGGGCAG CGTTGGGTCC TGGCCACGGG TGCGCATGAT CGTGCTCCTG TCGTTGAGGA CCGGGCTAGG CTGGCGGGGT
 GTCGTCGGCG TCGCGCGCGT AGAGCCCGTC GCAACCCAGG ACCGGTGCCC ACGGFACTA GCACGAGGAC AGCAACTCCT GGGCCGATCC GACCGCCCCA

FIG.- 10C

2801 TGCCTTACTG GTTAGAGAA TGAATCACCG ATACGGGAGC GAACGTGAAG CGACTGCTGC TGC AAAACGCT CTGCGACCTG AGCAACAACA TGAATGGTCT
 ACGGAATGAC CAATCGTCTT ACTTAGTGGC TATGGCGCTC GCTGACGAGC ACGTTTGTGA GACGCTGGAC TCGTTGTGT ACTTACCAGA
 2901 TCGGTTTCCG TGTTTCGTA AGTCTGGAAA CGCGGAAGTC AGCGCCCTGC ACCATTATGT TCCGGATCTG CATCGCAGGA TGCTGCTGGC TACCCCTGTG
 AGCAAAGGC ACAAGCAAT TCAGACCTTT GCGCCTTCAG TCGCGGGAGC TGGTAATACA AGCCTAGAC GTAGCGTCT ACGACGACCG ATGGGACACC
 3001 AACACCTACA TCTGTATTAA CGAAGCGCTG GCATTGACCC TGAGTGATT TTCTCTGGTC CCGCCGCATC CATACCGCCA GTTGTATTACC CTCACAACGT
 TTGTGGATGT AGACATAATT GCTTCGGAC CGTAACCTGG ACTCACTAAA AAGAGACCAG GCGGCGTAG GTATGGCGGT CAACAATGG GAGTGTGCA
 3101 TCCAGTAACC GGGCATGTTT ATCATCAGTA ACCCGTATCG TGAGCATCCT CTCTCGTTTC ATCGGTATCA TTACCCCCAT GAACAGAAAT TCCCCCTTAC
 AGGTCAATTG CCCGTACAAG TAGTAGTCAT TGGGCATAGC ACTCGTAGGA GAGAGCAAG TAGCCATAGT AATGGGGTA CTGTCTTTA AGGGGAATG
 3201 ACGGAGGCAT CAAGTGACCA AACAGGAAA AACCGCCCTT AACATGGCCC GCTTTATCAG AAGCCAGACA TTAACGCTTC TGGAGAACT CAACGAGCTG
 TGCCCTCCGTA GTTCACTGGT TTGTCTCTTT TTGGCGGGAA TTGTACCGGG CGAATAGTC TTCGGTCTGT AATTGCGAAG ACCTCTTGA GTTGCTCGAC
 3301 GACGGGATG AACAGGCAGA CATCTGTGAA TCGCTTCAAG ACCACGCTGA TGAGCTTTAC CGCAGGATCC GGAAATTGTA AACGTTAATA TTTTGTATAA
 CTGCGCCTAC TTGTCCGTCT GTAGACACTT AGCGAAGTGC TGGTGCAGT ACTCGAAATG GCGTCTTAGG CCTTTAATCAT TTGCAATTAT AAAACAATTT
 3401 ATTGCGGTTA AATTTTGTGT AAATCAGCTC ATTTTAAAC CAATAGGCCG AAATCGGCA AATCCCTTAT AAATCAAAAG AATAGACCGA GATAGGGTTG
 TAAGCGCAAT TTA AAAACAA TTTAGTCGAG TAAAAAATTG GTTATCCGGC TTTAGCCGTT TTAGTTTTC TTATCTGGCT CTATCCCAAC
 3501 AGTGTGTTC CAGTTTGAA CAAGAGTCCA CTATTAAAG ACGTGGACTC CAACGTCAA GGGCGAAAA CCGTCTATCA GGGCTATGGC CCACCTACGTG
 TCACAACAAG GTCAACCTT GTTCTCAGGT GATAATTTCT TGCACCTGAG GTTGCAGTTT CCCGCTTTT GGCAGATAGT CCCGATACCG GGTGATGCAC
 3601 AACCATCAC CTAATCAAGT TTTTGGGGT CGAGGTGCCG TAAAGCACTA AATCGGAACC CTAAAGGGAG CCCCCGATT AGAGCTTGAC GGGGAAAGCC
 TTGGTAGTGG GATTAGTTCA AAAAACCCCA GCTCCACGGC ATTTCTGTGAT TTAGCCTTGG GATTTCCCTC CAGTTCCGACG CGCATTTGGT GTGTGGCGG
 3701 GCGGAACGTG GCGAGAAAGG AAGGGAAGAA AGCGAAAGGA GCGGGCGCTA GGGCGCTGGC AAGTGTAGCG GTACACGCTG CCGTAACCA CACACCCGCC
 CCGCTTGCAC CGCTCTTCC TTCCCTTCTT TCGCTTTCCT CGCCCGCGAT CCCCGCGACG TTCACATCGC CAGTGCAGC CGCATTTGGT GTGTGGCGG
 3801 GCGCTTAATG CGCCGCTACA GGGCGGCTCC GGATCTCTGC TCGCGCTTTT CCGTGATGAC GGTGAAAAAC TCTGACACAT GCAGTCCCG GAGACGGTCA
 CCGGAATTAC GCGGCGATGT CCCGCGCAGG CCTAGGACGG AGCGGCAAA GCCACTACTG CCACTTTTGG AGACTGTGA CGTGAGGGC CTCTGCCAGT
 3901 CAGCTTGTCT GTAAGCGGAT GCCGGGAGCA GACAAGCCCG TCAGGGCGCG TCAGCGGGTG TTGGCGGGTG TCGGGGCGCA GCCATGACCC AGTCACGTAG
 GTCGAACAGA CATTCGCCTA CGGCCCTCGT CTGTTCCGGC AGTCCCGCGC AGTCCGCCAC AACCGCCCGT CGGTACTGGG TCAGTGCACT

FIG. 10D

4001 CGATAGCGGA GTGTATACTG GCTTAACTAT GCGGCATCAG AGCAGATTGT ACTGAGAGTG CACCATATGC GGTGTGAAAT ACCGCACAGA TCGGTAAGGA
 GCTATCGCCT CACATATGAC CGAATTGATA CGCCGTAGTC TCGTCTAACA TGACTCTCAC GTGGTATACG CCACACTTTA TGCGTGTCT ACGCATTCTT

4101 GAAATACCG CATCAGGCGC TCTTCCGCTT CCTCGCTCAC TGACTCGCTG CGCTCGGTGG TTGGGTGCG GCGAGCGGTA TCAGCTCACT CAAAGGCGGT
 CTTTATATGG GTAGTCCGG AGAAGGCGA GGAGCGAGTG ACTGAGCGAC GCGAGCCAGC AAGCCGACGC CGCTCGCCAT AGTCGAGTGA GTTTCGGCCA

4201 AATACGGTTA TCCACAGAAAT CAGGGGATAA CGCAGGAAAG AACATGTGAG CAAAAGGCCA GCAAAGGCC AGGAACCGTA AAAAGGCCG GTTGTGGCG
 TTATGCCAAT AGGTGTCTTA GTCCCTTATT GCTCCCTATT GTCTCTTTC GCTTCCGGT GTTTTCCGG TCCTTGGCAT TTTTCCGGC CAACGACCGC

4301 TTTTTCCTA GGTCCGCCC CCCTGACGAG CATCACAAA ATCGACGCTC AAGTCAGAG TGGCGAAACC CGACAGGACT ATAAAGATAC CAGGCGTTTC
 AAAAGGTAT CCGAGCGGG GGGACTGCTC GTAGTGTATT TAGCTGCGAG TTCAGTCTCC ACCGCTTTGG GCTGTCTTGA TATTCTATG GTCCGCAAG

4401 CCCCTGGAAG CTCCTCTGTG CGTCTCTCTG TTCCGACCCT GCCGTTACC GGATACCTGT CCGCTTTCT CCCTTCGGA AGCGTGGCG TTTCTCATAG
 GGGGACCTTC GAGGAGCAC GCGAGAGGAC AAGGCTGGG CCGCGAATGG CCTATGGACA GCGGAAAGA GGAAGCCCT TCGCACCGC AAAGAGTATC

4501 CTCACGCTGT AGGTATCTCA GTTCGGTGA GTTCGGTTCG TCCAAGCTGG GCTGTGTGCA CGAACCCCC GTTCAGCCC ACCGCTGCG CTTATCCGT
 GAGTCCGACA TCCATAGAGT CAAGCCACAT CCAGCAAGC AGGTTGACC CGACACACGT GCTTGGGGG CAAGTCGGC TGGCGACCG GAATAGGCCA

4601 AACTATCGTC TTGAGTCCAA CCCGGTAAGA CACGACTTAT CGCCACTGGC AGCAGCCACT GGTAACAGGA TTAGCAGAGC GAGGTATGTA GCGGTGCTA
 TTGATAGCAG AACTCAGGT GGGCCATTCT GTGCTGAATA GCGGTGACC TCGTCCGTGA CCATTGTCTT ATCTGTCTCG CTCCATACAT CCGCCACGAT

4701 CAGAGTTCTT GAAGTGGTGG CCTAACTACG GCTACACTAG AAGGACAGTA TTTGGTATCT GCGCTCTGCT GAAGCCAGTT ACCTTCGGAA AAAGAGTTGG
 GTCTCAAGAA CTTCAACCAC GGATTGATGC CGATGTGATC TTCTGTGTC ATAACATAGA CCGGAGACGA CTTCGGTCAA TGGAAAGCCTT TTTCTCAACC

4801 TAGCTCTTGA TCCGGCAAAAC AAACCACCGC TGGTAGCGGT GGTTTTGTG TTTGCAAGCA GCAGATTACG CGCAGAAAAA AAGGATCTCA AGAAGATCCT
 ATCGAGAACT AGGCCGTTG TTTGGTGGC ACCATCGCCA CCAAAAAAAC AAACGTTCTG CGTCTAATGC GCGTCTTTT TTCTTAGAGT TCTTCTAGGA

4901 TTGATCTTTT CTACGGGTC TGACGCTCAG TGAACGAAA ACTCACGTTA AGGATTTTG GTCATGAGAT TATCAAAAAA GATCTTCACC TAGATCCCTT
 AACTAGAAA GATGCCCCAG ACTGCGAGTC ACCTTGCTTT TGAGTGCAAT TCCCTAAAA CAGTACTCTA ATAGTTTTT CTAGAAAGTG ATCTAGGAAA

5001 TAAATTAAA ATGAAGTTT AAATCAATCT AAAGTATATA TGAGTAACT TGGTCTGACA GTTACCAATG CTTAATCAGT GAGGCACCTA TCTCAGCGAT
 ATTTAATTTT TACTTCAAAA TTTAGTTAGA TTTTCATATAT ACTCATTTGA ACCAGACTGT CAATGGTTAC GAATTAGTCA CTCCGTGGAT AGAGTCGCTA

5101 CTGTCTATTT CGTTCATCCA TAGTTGCCG ACTCCCGTC GTGTAGATAA CTACGATACG GGAGGGCTTA CCATCTGGCC CCAGTGCTGC AATGATACCG
 GACAGATAA GCAAGTAGGT ATCAACGGAC TGAGGGGCGAG CACATCTATT GATGCTATG CCGTCCGGAAT GGTAGACCGG GGTACGACG TTAATATGGC

FIG. 10E

5201 CGAGACCCAC GCTCACCGGC TCCAGATTTA TCAGCAATAA ACCAGCCAGC CGGAAGGGCC GAGCGCAGAA GTGTCCTGC AACTTTATCC GCCTCCATCC
GCTCTGGTG CGAGTGGCCG AGGTCTAAAT AGTCGTTATT TGGTCGGTCG GCCTTCCCG CTCGCGTCTT CACCAGGACG TTGAAATAGG CGGAGGTAGG

5301 AGTCATATAA TTGTTGCCG GAAGCTAGAG TAAAGTAGTTC GCCAGTTAAT AGTTTGGCA ACGTTGTTGC CAFTGCTGCA GGCATCGTGG TGTACCGCTC
TCAGATAATT AACACGGCC CTTTCGATCTC ATTATCAAG CGGTCAATTA TCAACACCGT TGCAACAACG GTAACGACGT CCGTAGCACC ACAGTCCGAG

5401 GTCGTTTGGT ATGGCTTCAT TCAGCTCCG TCCCAACGA TCAAGGCGAG TTACATGATC CCCCATGTTG TGCAAAAAAG CCGTTAGCTC CTTCCGTTCT
CAGCAACCA TACCGAAGTA AGTCGAGGCC AAGGTTGCT AGTTCCGCTC AATGTACTAG GGGGTACAAC ACGTTTTTTC GCCAATCGAG GAAGCCAGGA

5501 CCGATCGTTG TCAGAAAGTA GTTGGCCGCA GTGTTATCAC TCATGGTTAT GGCAGCACTG CATAATTCTC TTAATGTCAT GCCATCCGTA AGATGCTTTT
GGCTAGCAAC AGTCTTCATT CAACCGCGCT CACAATAGTG AGTACCAATA CCGTCGTGAC GTATTAAGAG AATGACAGTA CCGTAGGCAT TCTACGAAAA

5601 CTGTGACTGG TGAGTACTCA ACCAAGTCAT TCTGAGAATA GTGTATGCG CGACCGAGTT GCTCTTGCCC GCGTCAACA CCGGATAATA CCGCGCCACA
GACACTGACC ACTCATGAGT TGGTTCAGTA AGACTCTTAT CACATACGCC GCTGGCTCAA CGAGAACGG CCGCAGTTGT GCCCTATTAT GCGCGGGTGT

5701 TAGCAGAACT TTAAAAGTG TCATCATTTG AAAACGTTCT TCGGGGCGAA AACTCTCAAG GATCTTACCG CTGTTGAGAT CCAGTTTCAT GTAACCCACT
ATCGTCTTGA AATTTTCAG AGTAGTAAC TTTTGCAAGA AGCCCCGCT TTGAGAGTTC CTAGAATGGC GACAACTCTA GGTCAGCTA CATTGGGTGA

5801 CGTGCACCCA ACTGATCTC AGCATCTTTT ACTTTCACCA GCGTTTCTGG GTGAGCAAAA ACAGGAAGGC AAAATGCCGC AAAAAGGGA ATAAAGGGCGA
GCACGTGGGT TGACTAGAAG TCGTAGAAAA TGAAAGTGGT CGCAAAGACC CACTCGTTTT TGTCCCTCCG TTTTACGGCG TTTTTCCTT TATTCCCGCT

5901 CACGGAATG TTGAATACTC ATACTCTTCC TTTTTCATA TTATTGAAGC ATTTATCAGG GTTATTGTCT CATGAGCGGA TACATATTG AATGTATTTA
GTGCCCTTAC AACTTATGAG TATGAGAAGG AAAAAGTTAT AATAACTTCG TAAATAGTCC CAATAACAGA GTACTCGCCT ATGTATAAAC TTACATAAAT

6001 GAAAAATAA CAAATAGGG TTCCGGGCAC ATTTCCCGA AAAGTCCAC CTGACGTCTA AGAAACCAT ATTATCATGA CATTAACTA TAAAAATAGG
CTTTTATTT GTTTATCCCC AAGGCGCGT TTTACCGGTG GACTGCAGAT TCTTTGGTAA TAATAGTACT GTAATTGGAT ATTTTATATC

6101 CGTATCACA GGCCCTTTCG TCTTCAA
GCATAGTGCT CCGGGAAGC AGAAGT

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FIG._10F

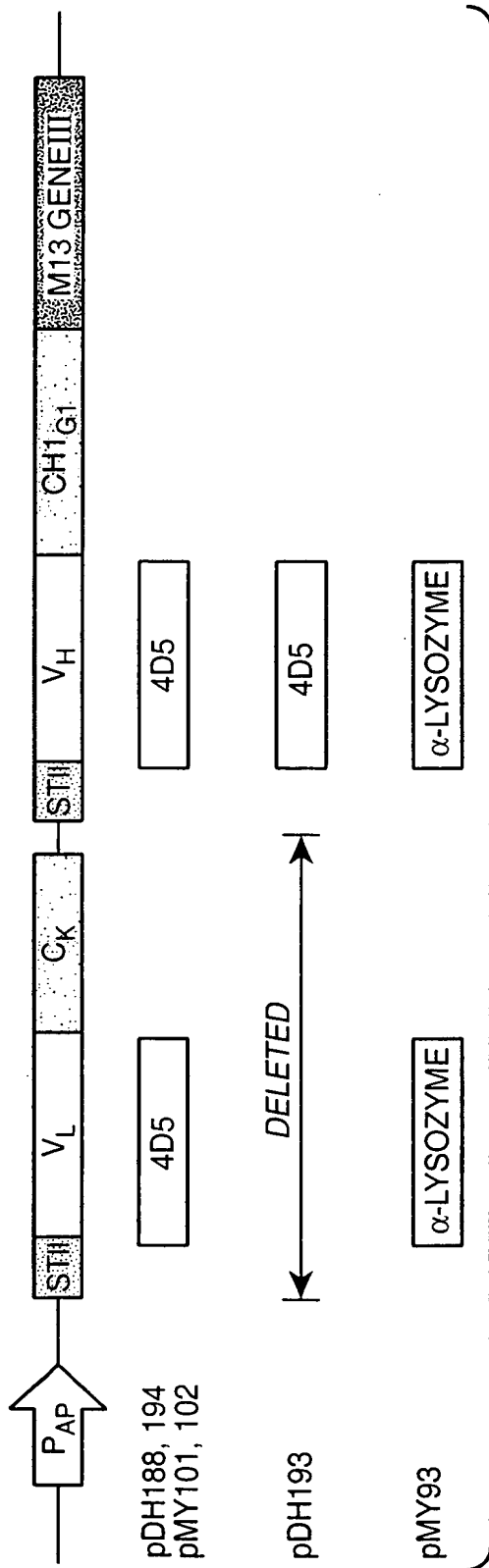


FIG._11A

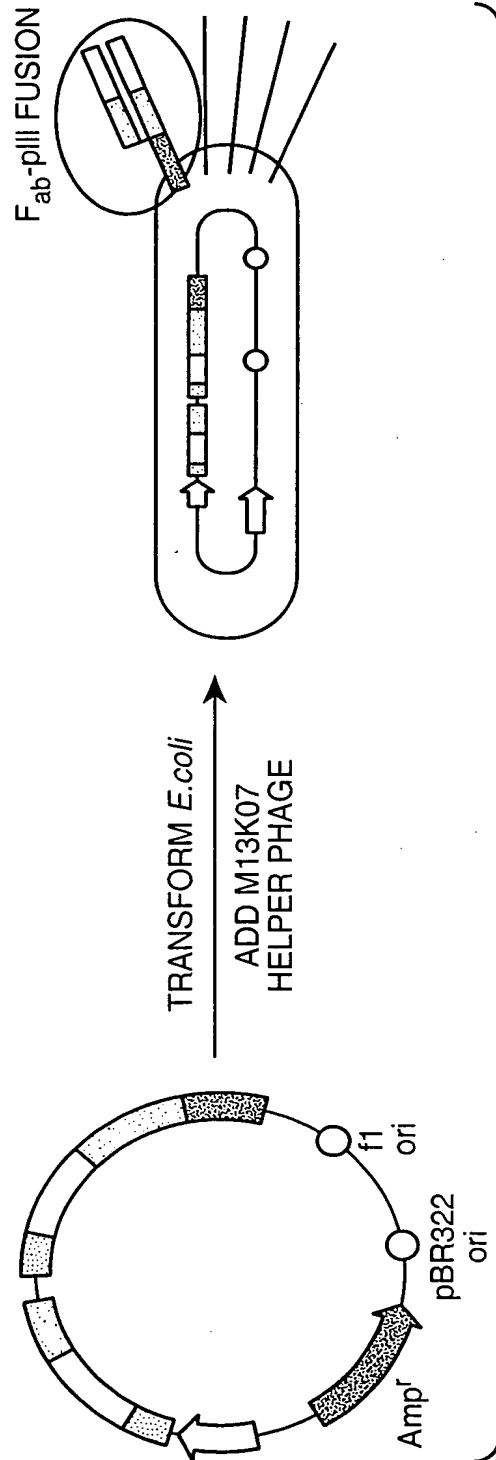


FIG._11B

(E25) - LIGHT CHAIN

DIQLTQSPSS LSASVGDRVT ITCRASQSDV YDGDSYMNWY QQKPGKAPKL LIYAASYLES GVPSRFSGSG
 SGTDFTLTIS SLQPEDFATY YCQQSHEDPY TFGQGTKVEI KRTVAAPSVF IFPPSDEQLK SGTASVVCLL
 NNFYPREAKV QWKVDNALQS GNSQESVTEQ DSKDSTYSLs STLTLKADY EKHKVYACEV THQGLSSPVT
 KSFNRGEC

(E25) - HEAVY CHAIN

EVQLVESGGG LVQPGGSLRL SCAVSGYSIT SGYSWNWIRQ APGKGLEWVA SITYDGSTNY NPSVKGRITI
 SRDDSKNTFY LQMNSLRAED TAVYYCARGs HYFGHWHFAV WGQGTlVTVS SASTKGPSVF PLAPSSKSTS
 GGTAALGCLV KDYFPEPVTV SWNSGALTSG VHTFPAVLQS SGLYSLSSVV TVPSSSLGTQ TYICNVNHKP
 SNTKVDKKVE PKSCDKTHTC PPCPAPELLG GPSVFLFPPK PKDTLMISRT PEVTCVVVDV SHEDPEVKFN
 WYVDGVEVHN AKTKPREEQY NSTYRVVSVL TVLHQDWLNG KEYKCKVSNK ALPAPIEKTI SKAKGQPREP
 QVYTLPPSRE EMTKNQVSLT CLVKGfYPSD IAVEWESNGQ PENNYKTPP VLDSDGSFFL YSKLTVDKSR
 WQQGNVFSCS VMHEALHNHY TQKSLSLSPG K

(E26) - LIGHT CHAIN

DIQLTQSPSS LSASVGDRVT ITCRASKPVD GEGDSYLNWY QQKPGKAPKL LIYAASYLES GVPSRFSGSG
 SGTDFTLTIS SLQPEDFATY YCQQSHEDPY TFGQGTKVEI KRTVAAPSVF IFPPSDEQLK SGTASVVCLL
 NNFYPREAKV QWKVDNALQS GNSQESVTEQ DSKDSTYSLs STLTLKADY EKHKVYACEV THQGLSSPVT
 KSFNRGEC

(E26) - HEAVY CHAIN

EVQLVESGGG LVQPGGSLRL SCAVSGYSIT SGYSWNWIRQ APGKGLEWVA SITYDGSTNY NPSVKGRITI
 SRDDSKNTFY LQMNSLRAED TAVYYCARGs HYFGHWHFAV WGQGTlVTVS SASTKGPSVF PLAPSSKSTS
 GGTAALGCLV KDYFPEPVTV SWNSGALTSG VHTFPAVLQS SGLYSLSSVV TVPSSSLGTQ TYICNVNHKP
 SNTKVDKKVE PKSCDKTHTC PPCPAPELLG GPSVFLFPPK PKDTLMISRT PEVTCVVVDV SHEDPEVKFN
 WYVDGVEVHN AKTKPREEQY NSTYRVVSVL TVLHQDWLNG KEYKCKVSNK ALPAPIEKTI SKAKGQPREP
 QVYTLPPSRE EMTKNQVSLT CLVKGfYPSD IAVEWESNGQ PENNYKTPP VLDSDGSFFL YSKLTVDKSR
 WQQGNVFSCS VMHEALHNHY TQKSLSLSPG K

(E27) - LIGHT CHAIN

DIQLTQSPSS LSASVGDRVT ITCRASKPVD GEGDSYLNWY QQKPGKAPKL LIYAASYLES GVPSRFSGSG
 SGTDFTLTIS SLQPEDFATY YCQQSHEDPY TFGQGTKVEI KRTVAAPSVF IFPPSDEQLK SGTASVVCLL
 NNFYPREAKV QWKVDNALQS GNSQESVTEQ DSKDSTYSLs STLTLKADY EKHKVYACEV THQGLSSPVT
 KSFNRGEC

(E27) - HEAVY CHAIN

EVQLVESGGG LVQPGGSLRL SCAVSGYSIT SGYSWNWIRQ APGKGLEWVA SIKYSGETKY NPSVKGRITI
 SRDDSKNTFY LQMNSLRAED TAVYYCARGs HYFGHWHFAV WGQGTlVTVS SASTKGPSVF PLAPSSKSTS
 GGTAALGCLV KDYFPEPVTV SWNSGALTSG VHTFPAVLQS SGLYSLSSVV TVPSSSLGTQ TYICNVNHKP
 SNTKVDKKVE PKSCDKTHTC PPCPAPELLG GPSVFLFPPK PKDTLMISRT PEVTCVVVDV SHEDPEVKFN
 WYVDGVEVHN AKTKPREEQY NSTYRVVSVL TVLHQDWLNG KEYKCKVSNK ALPAPIEKTI SKAKGQPREP
 QVYTLPPSRE EMTKNQVSLT CLVKGfYPSD IAVEWESNGQ PENNYKTPP VLDSDGSFFL YSKLTVDKSR
 WQQGNVFSCS VMHEALHNHY TQKSLSLSPG K

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LIGHT CHAIN

E26

DIQLTQSPSS	LSASVGDRVT	ITCRASKPVD	GEGDSYLNWY	QQKPGKAPKL	LIYAASYLES
GVPSRFGSGG	SGTDFTLTIS	SLQPEDFATY	YCQQSHEDPY	TFGQGTKVEI	KRTVAAPSVF
IFPPSDEQLK	SGTASVVCLL	NNFYPREAKV	QWKVDNALQS	GNSQESVTEQ	DSKDDSTYSL
STLTLSKADY	EKHKVYACEV	THQGLSSPVT	KSFNRGEC		

E27

DIQLTQSPSS	LSASVGDRVT	ITCRASKPVD	GEGDSYLNWY	QQKPGKAPKL	LIYAASYLES
GVPSRFGSGG	SGTDFTLTIS	SLQPEDFATY	YCQQSHEDPY	TFGQGTKVEI	KRTVAAPSVF
IFPPSDEQLK	SGTASVVCLL	NNFYPREAKV	QWKVDNALQS	GNSQESVTEQ	DSKDDSTYSL
STLTLSKADY	EKHKVYACEV	THQGLSSPVT	KSFNRGEC		

HEAVY CHAIN

E26

EVQLVESGGG	LVQPGGSLRL	SCAVSGYSIT	SGYSWNWIRQ	APGKGLEWVA	SITYDGSTNY
NPSVKGRITI	SRDDSKNTFY	LQMNSLRAED	TAVYYCARGS	HYFGHWHFAV	WGQGLVTVS
SASTKGPSVF	PLAPSSKSTS	GGTAALGCLV	KDYFPEPVT	SWNSGALTSG	VHTFPAVLQS
SGLYSLSSV	TVPSSSLGTQ	TYICNVNHKP	SNTKVDKKVE	PKSCDKTHT	

E27

EVQLVESGGG	LVQPGGSLRL	SCAVSGYSIT	SGYSWNWIRQ	APGKGLEWVA	SIKYSGETKY
NPSVKGRITI	SRDDSKNTFY	LQMNSLRAED	TAVYYCARGS	HYFGHWHFAV	WGQGLVTVS
SASTKGPSVF	PLAPSSKSTS	GGTAALGCLV	KDYFPEPVT	SWNSGALTSG	VHTFPAVLQS
SGLYSLSSV	TVPSSSLGTQ	TYICNVNHKP	SNTKVDKKVE	PKSCDKTHT	

FIG. 13

E26

EVQLVESGGG	LVQPGGSLRL	SCAVSGYSIT	SGYSWNWIRQ	APGKGLEWVA	SITYDGSTNY
NPSVKGRITI	SRDDSKNTFY	LQMNSLRAED	TAVYYCARGS	HYFGHWHFAV	WGQGLVTVS
SEGGGSEGGG	SEGGGSDIQL	TQSPSSLSAS	VGDRVITITCR	ASKPVDGEGD	SYLNWYQQKP
GKAPKLLIYA	ASYLESGVPS	RFSGSGSGTD	FTLTISLQ	EDFATYYCQQ	SHEDPYTFGQ
GTKVEIKR					

E27

EVQLVESGGG	LVQPGGSLRL	SCAVSGYSIT	SGYSWNWIRQ	APGKGLEWVA	SIKYSGETKY
NPSVKGRITI	SRDDSKNTFY	LQMNSLRAED	TAVYYCARGS	HYFGHWHFAV	WGQGLVTVS
SEGGGSEGGG	SEGGGSDIQL	TQSPSSLSAS	VGDRVITITCR	ASKPVDGEGD	SYLNWYQQKP
GKAPKLLIYA	ASYLESGVPS	RFSGSGSGTD	FTLTISLQ	EDFATYYCQQ	SHEDPYTFGQ
GTKVEIKR					

FIG. 14

LIGHT CHAIN

E26

DIQLTQSPSS LSASVGDRVT ITCRASKPVD GEGDSYLNWY QQKPGKAPKL LIYAASYLES
GVPSRFSGSG SGTDFTLTIS SLQPEDFATY YCQQSHEDPY TFGQGTKVEI KRTVAAPSVF
IFPPSDEQLK SGTASVVCLL NNFYPREAKV QWKVDNALQS GNSQESVTEQ DSKDSTYSLs
STLTLSKADY EKHKVYACEV THQGLSSPVT KSFNRGEC

E27

DIQLTQSPSS LSASVGDRVT ITCRASKPVD GEGDSYLNWY QQKPGKAPKL LIYAASYLES
GVPSRFSGSG SGTDFTLTIS SLQPEDFATY YCQQSHEDPY TFGQGTKVEI KRTVAAPSVF
IFPPSDEQLK SGTASVVCLL NNFYPREAKV QWKVDNALQS GNSQESVTEQ DSKDSTYSLs
STLTLSKADY EKHKVYACEV THQGLSSPVT KSFNRGEC

HEAVY CHAIN

E26

EVQLVESGGG LVQPGGSLRL SCAVSGYSIT SGYSWNWIRQ APGKGLEWVA SITYDGSTNY
NPSVKGRITI SRDDSKNTFY LQMNSLRAED TAVYYCARGS HYFGHWHFAV WGQGTTLVTVS
SASTKGPSVF PLAPSSKSTS GGTAALGCLV KDYFPEPVTV SWNSGALTSG VHTFPAVLQS
SGLYSLSSVV TVPSSSLGTQ TYICNVNHKP SNTKVDKKVE PKSCDKTHTC PPC

E27

EVQLVESGGG LVQPGGSLRL SCAVSGYSIT SGYSWNWIRQ APGKGLEWVA SIKYSGETKY
NPSVKGRITI SRDDSKNTFY LQMNSLRAED TAVYYCARGS HYFGHWHFAV WGQGTTLVTVS
SASTKGPSVF PLAPSSKSTS GGTAALGCLV KDYFPEPVTV SWNSGALTSG VHTFPAVLQS
SGLYSLSSVV TVPSSSLGTQ TYICNVNHKP SNTKVDKKVE PKSCDKTHTC PPC

FIG. 15